

# Missouri's Coyotes

*A Guide to Management,  
Nuisance Prevention, and  
Damage Control*



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The Latin name for coyote, *Canis latrans*, means barking dog.

## INTRODUCTION

**H**istorically, coyotes lived in open grasslands and prairies of the western United States and as far north as southwestern Canada.

Although many wildlife species, including the wolf, disappeared as people settled the land, coyotes found conditions favorable and flourished. Until the first half of the 1900s, coyotes lived mostly in the prairie region of the northern and western parts of Missouri. Responding to losses of livestock from farmers and ranchers, the Missouri legislature passed a bounty law on coyotes and wolves in 1825.

Bounties were paid with state funds until the end of 1968. Some counties continued to pay a small bounty for several more years.

Bounties, however, had little effect on the adaptable coyote. Starting in the 1950s, coyote populations increased dramatically and spread to the southern and eastern parts of Missouri. By the end of the 1970s, coyotes extended their range to all parts of Missouri, including the Bootheel.

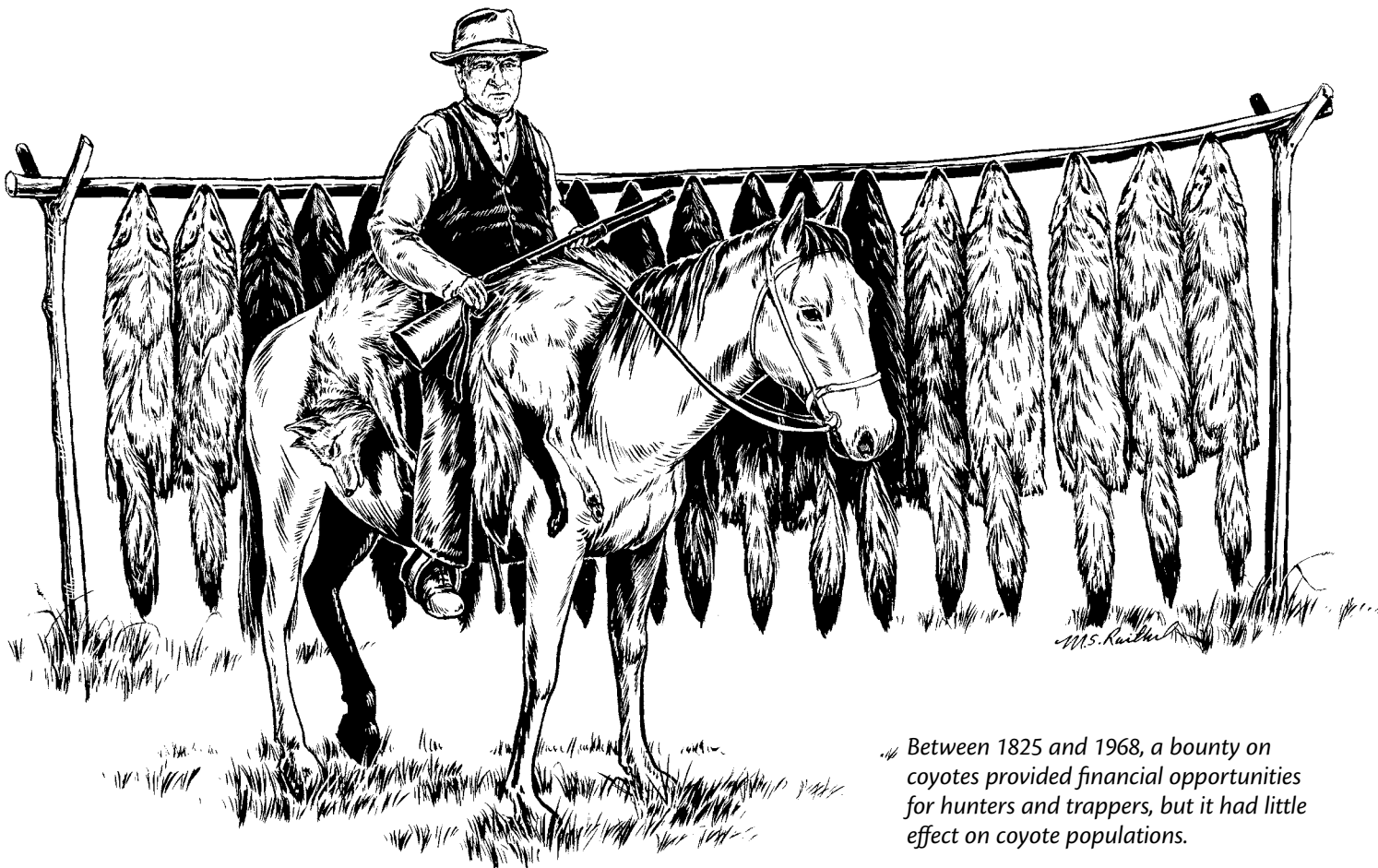
Today, coyotes can be found in North and Central America — from Alaska to central Mexico and from Newfoundland to Florida. Coyotes are also well populated throughout Missouri, and can be found in or near the major metropolitan areas of Kansas City, Springfield and St. Louis.

Persons living in urban or rural areas may see coyotes close to home. Many people welcome these valuable members of the wildlife community for the

important role they play in reducing the rodent population.

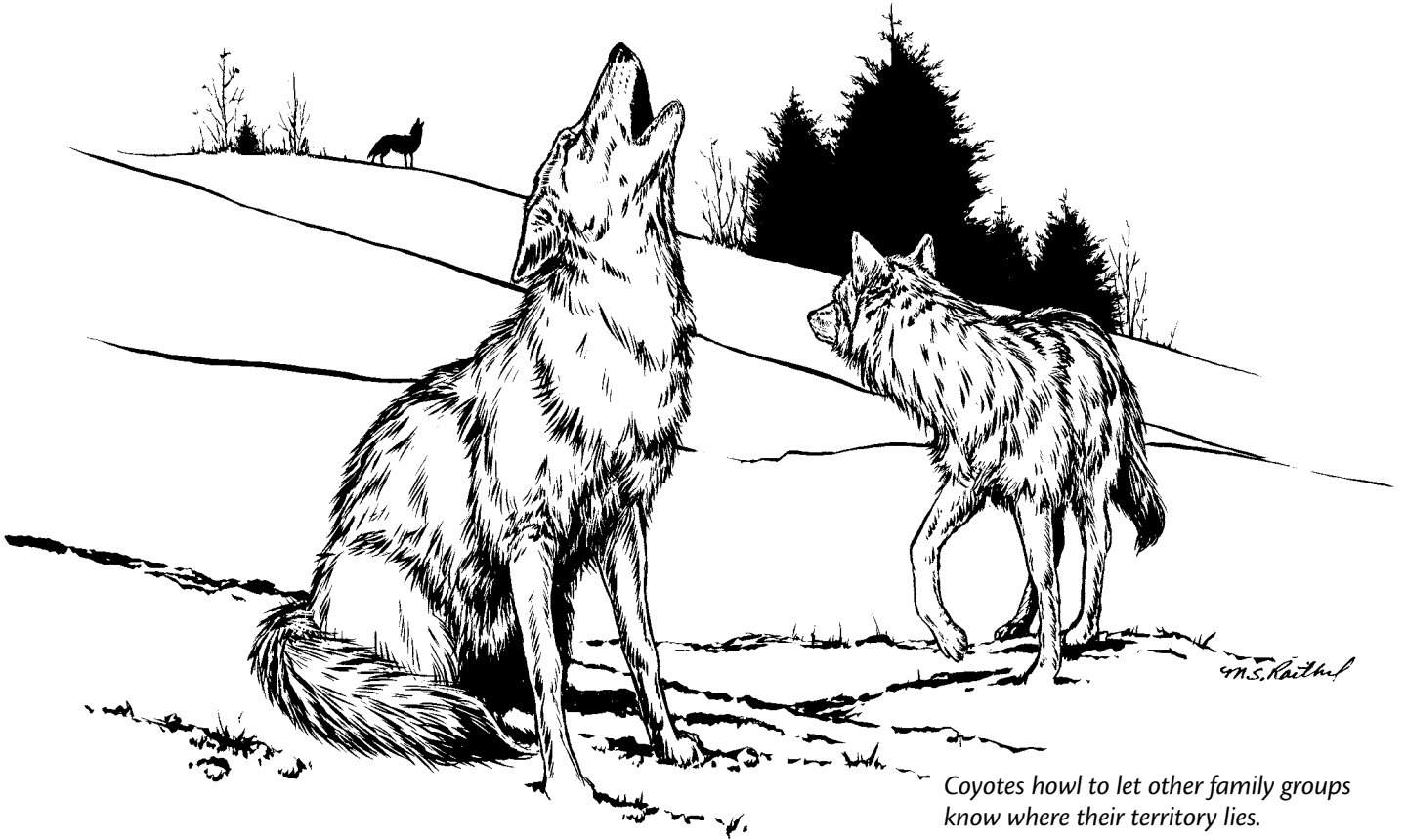
Because of their close proximity to coyotes, many Missourians want to learn more about these “little prairie wolves,” as members of the Lewis and Clark expedition called them — either to enjoy watching them, hear them howl or to learn how to take preventive measures to protect their property.

The first step in resolving conflicts between people and wildlife is an understanding of the wildlife species involved. This booklet is designed to help readers understand coyote behavior. It also offers preventative methods and nonlethal solutions to coyote problems. Lethal methods, which are often the best short-term control options, are also included.



*Between 1825 and 1968, a bounty on coyotes provided financial opportunities for hunters and trappers, but it had little effect on coyote populations.*

## LIFE HISTORY



*Coyotes howl to let other family groups know where their territory lies.*

Coyotes are not large animals. Males weigh up to 35 pounds, and females weigh an average of 5 to 6 pounds less. Coyotes weighing 40 pounds or more are rare.

Color varies with individual coyotes, but reddish gray is most common. Some animals, however, may be darker and others more red. Older animals tend to be darker and more reddish, and younger animals are more gray.

### Habitat

In Missouri, coyotes are found in all types of habitat from the Ozark forests to northern crop fields and from the southeast lowlands to populated subdivisions of major metropolitan areas.

In spite of their varied habitat, coyotes are basically prairie animals. They prefer open pastures and fields with some brush and weeds where they can hunt for prey, such as mice, rabbits and other small mammals.

Even in the Ozarks, coyotes choose open fields, glades and trails over dense forest. Coyotes may travel logging trails in the forests, but their main food source is found in open fields and pastures.

The size of coyote home range varies from one family to another. Home ranges are larger in late winter during the mating season and smaller in the spring when food is plentiful and the mated pairs are raising pups. Three or four square miles is approximately as large an area as most mated pairs cover. While feeding pups, coyotes in Missouri usually hunt no more than a mile from their den. This contrasts greatly with coyotes in the arid western states where mated coyotes may hunt more than six miles from their denning area.

Like dogs, wolves and other canines, coyotes mark their territories with urine and droppings. Howling is another way that family groups identify their territory.

Mated pairs defend territories when they have pups. At other times, territories often overlap. Encounters between mated pairs and other coyotes for territories are not violent and deadly like those between larger canines, such as wolves.

### Feeding habits

Although they are primarily carnivores, coyotes are opportunists and will eat what is readily available. Mice, rats, ground squirrels, rabbits, carrion and a wide assortment of other mammals make up the bulk of their diet. Snakes and birds, as well as an occasional wild turkey or white-tailed deer fawn, are also preyed upon by coyotes.

During the summer and fall, coyotes are more omnivorous. Pups often eat a steady diet of grasshoppers in the late summer when they begin hunting their own food. Crickets, beetles and other insects are eaten by coyotes of all ages.

*The male coyote is a good provider and does a large share of the hunting while the female stays closer to the pups.*



Coyotes also like fruits and berries, such as mulberries, blackberries, wild strawberries and wild cherries. A thicket of ripening wild plums or a persimmon tree may be visited by coyotes regularly. Many truck farmers know that coyotes also enjoy watermelons.

Coyotes are scavengers, too. In rural areas, coyotes eat table scraps, including vegetables, thrown out by farm families. In urban areas or around campgrounds, coyotes sometimes raid garbage cans for discarded scraps. Although coyotes do not cause a large problem to sweet corn growers, they sometimes pull down a stalk or two and nibble on the ears of corn.

Coyotes also feed on carrion. Following deer season, coyote droppings often

are full of deer hair, indicating that coyotes have cleaned up the remains from field-dressed deer or eaten wounded deer not recovered by hunters. Coyotes sometimes feed on road-killed deer along rural highways.

## Reproduction

In Missouri, coyotes breed from mid-February into the first few days of March. Male coyotes do not breed their first year, but some females do. Gestation is about 63 days, and most coyote pups in Missouri are born from mid-April through the first week of May. Litter size can vary from two to 11 pups — sometimes more.

Coyote pups, blind and helpless at birth, are covered with a woolly, brownish-gray fur. Their eyes open when they are about 10 days old. At about 3 weeks of age, the young come out of the den and are on their own by fall.

## Care of young

Female coyotes prefer a dry, safe place to have their pups. A common den site is a bulldozed brush and tree pile. The female will crawl into the bulldozed pile and dig out a den under the root wad of a large tree.

Another popular den site is under the base of a large, standing tree that has an opening at ground level. Coyote pups sometimes are raised in hollow

logs and under rock ledges. Other times, female coyotes may enlarge an abandoned badger or woodchuck burrow.

A female often prepares more than one den in the same area. If there is human disturbance or if the den becomes lice-infested or wet, she will move the pups to another location. Most coyote pups have been moved several times by the time they are old enough to leave the den on their own. If the pups are too small to follow their mother, she carries them one at a time by the nape of the neck to the new den site.

To keep watch over the area, the female may find an elevated place a hundred yards or more away from the den. There she will dig a bed in a grassy, weedy area.

In Missouri, coyote pups are weaned when they are about 6 weeks old. From this time on, they usually do not stay in a den. Instead they live in a brushy, weedy area. Coyotes do not use dens until the following spring when the female has a new litter. The rest of the

year, they sleep in a protected place on the ground.

In the early stages of feeding the pups, the parents eat their fill of a kill and regurgitate their stomach contents at the den for the pups to eat. As the pups develop, the parents bring them pieces of meat that the pups must chew themselves. The male coyote is a good provider and does a large share of the hunting while the female stays closer to the pups.

As the summer advances, coyote pups require more and more food, and the parents sometimes are hard pressed to keep them fed. To supplement their diet, coyote pups begin to catch crickets, June bugs, grasshoppers, frogs and other small animals.

As the pups develop, they move over a larger area until they expand their territory from less than an acre in June to several acres by late August. During this period, a disturbance, such as mowing or planting, may cause the family to move to a safer place, which could be a mile or more away.

By late October, the pups begin to hunt for themselves and cover more ground. The litter may stay together as a loose family group as the pups begin to disperse in the winter. By spring, the family unit usually is dissolved.

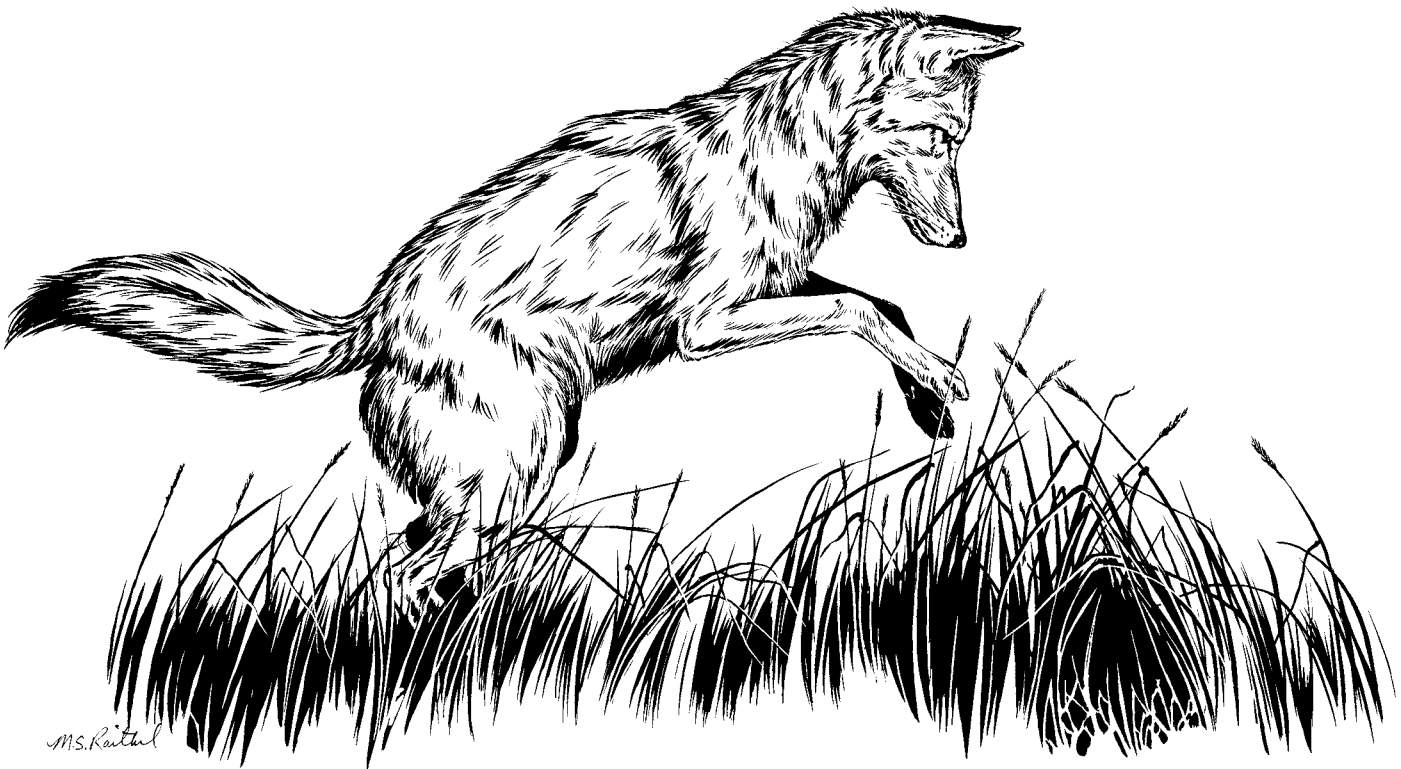
## Effects on game and other wildlife

Occasionally hunters think coyotes have an adverse impact on wild game. This is rarely the case in Missouri. Small game populations, such as rabbits and quail, can thrive in areas of high coyote populations if adequate food and cover are available. Coyotes are not serious wild turkey predators.

Coyotes sometimes kill white-tailed deer fawns, but not enough to have an impact on the deer population in Missouri. Researchers found that free-roaming dogs have more impact on young deer than coyotes.

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*Coyotes prey upon mice and rats, thus helping to keep the rodent population in check. Their effect on game species is minimal.*



## TYPES OF NUISANCE PROBLEMS

**B**ecause they are so adaptable, coyotes live in big cities, suburban areas and small towns, as well as in the country. As people continue to move out to the country and as coyotes continue to move into the cities, more opportunities for conflicts develop.

### Conflicts with people

Typically shy, elusive animals, coyotes don't normally pose a threat to humans. Most people who live in areas of high coyote populations rarely see one. In areas where they are hunted and trapped, coyotes are very wary of humans. However, in urban areas where they are less likely to be hunted or trapped, they have less fear of humans. If food, such as outside pet food or garbage is deliberately or inadvertently provided by people, coyotes can develop a dependency on these food sources. Subsequently, coyotes can become quite bold, showing up in a yard or in close proximity to a house.

So far, there have been no documented cases of coyotes attacking people in Missouri. However, coyotes exhibiting threatening behavior should be reported to the local authorities or the Missouri Department of Conservation. Seeing a coyote in your neighborhood is not necessarily a reason for alarm. Treat coyotes like any other wild animal that could become a nuisance.

### Killing or injuring pets

Coyotes occasionally kill or injure small dogs or cats. Larger breeds of dogs, such as full-size collies, German shepherds and Labrador retrievers are not typically in danger from coyotes, except when they are puppies.

The best solution is to keep small pets inside or accompany them when outside. Coyotes with pups sometimes become aggressive to dogs that come near their dens in April and May. Human disturbance at the den site usually will cause coyotes to move the pups.

### Preventing conflicts

Do not intentionally or unintentionally feed coyotes. Feed pets inside, secure garbage, and keep your yard free of refuse and brush piles to reduce rodent and rabbit populations.

Make coyotes feel unwelcome in your yard by harassing or chasing them away with loud noises (shouting, beating on pots/pans, air horn), throwing rocks and sticks, or using a water hose.

- Do not allow cats and small dogs out at night unless you accompany them.
- Keep outside areas for pets well lit.
- Obey leash laws to prevent uncontrolled dogs from confronting coyotes.
- Fence your yard.
- Encourage coyote trapping and hunting in season if permitted by local ordinances.
- Organize neighbors to change local ordinances to allow trapping as a management tool.



*Because coyotes live in or near cities, as well as in rural areas, more people come into contact with them.*





*Most coyotes in Missouri do not kill calves, but some will prey on a young one if the mother has left it alone.*

## Problems at airports

Coyotes sometimes pose a threat to airplanes that are landing or taking off. Striking a coyote on a runway could damage a plane's landing gear.

A high fence around an airport will help keep out most coyotes. Trapping, snaring and shooting are other options.

## Loss of livestock

In Missouri, coyotes usually can find an abundance of food in the wild. Most livestock predation occurs when coyotes are feeding pups in spring and early summer.

### Calves

Most coyotes in Missouri do not kill calves, and many farmers have raised cattle for years without experiencing problems.

Coyotes seen in and around calving pastures usually are not a cause for alarm. Some may be attracted to the smell of calving cows. After the calves are born, coyotes may clean up the afterbirth and eat the rich colostrum manure left by the newborns and leave the calves alone.

Occasionally, a coyote or a family of coyotes may kill young calves to feed their pups. Most healthy calves killed by coyotes are less than a week old and have been left alone by their mothers. Cows often leave the main herd when they give birth. The newborn calf becomes vulnerable to predators when its mother leaves it to seek food and water. When the cow and calf rejoin the herd or the calf is at least 10 days old, the danger from coyotes is usually over.

Coyotes occasionally kill calves during the birthing process. In some cases, if coyotes find a cow having a long, hard labor, they may prey upon the calf while it is protruding from the cow, sometimes mutilating the mother in the process.

Coyotes may kill a sick calf, especially if the cow is weak and unable to defend it. Calves that have scours or other diseases are especially vulnerable to coyote attacks. Sometimes it may appear that a coyote has killed a calf, but instead it was just feeding on one that died from natural causes.

Good animal husbandry practices can help reduce calf losses. First, it is important to know when cows are going to calve. Young cows or mature ones that have not been good mothers

in the past should be watched closely. When a cow has a calf away from the herd, it should be fed and watered so it doesn't have to leave its calf alone. Sometimes cows can be brought close to the farmhouse until their calves are old enough and vigorous enough to be turned out with the rest of the herd.

Guard animals also can provide protection to cows that are calving. These trained animals bond with livestock but are aggressive to wild dogs and coyotes. Guard animals lose their effectiveness, however, if the cows go off by themselves to calve. For more information on guard animals, see Page 10.

### Sheep

Not all coyotes kill sheep. Coyotes often make routine trips through a sheep pasture without killing sheep. Coyotes that kill sheep prefer lambs to larger mature ewes. Occasionally, two or three coyotes collaborate in bringing down a large ewe. In these cases, the wounds resemble those made by a dog because of the difficulty that 25- to 30-pound coyotes have in pulling down such a large animal. See Page 9.

Coyotes are more likely to kill lambs during June and July when they are feed-

ing pups. They usually kill one sheep at a time and feed on it until it is devoured.

A coyote looking for food approaches a flock of sheep much like a border collie. When a lamb breaks away from the flock, the coyote runs beside it and sinks its upper canine teeth just behind the ear and its lower canine teeth in the throat.

The coyote clamps down tightly in this strangle hold and holds on until the lamb is unconscious. The coyote usually begins feeding in the flank area while the lamb is still alive. On rare occasions, a coyote may forego the throat bite, grab the lamb in the flank, throw it down and begin feeding.

Coyotes may develop a pattern of killing sheep every day, every other day or sometimes every third day. They often kill another sheep as soon as the last one has been devoured.

A high-tensile predator-proof electric fence around a pasture can keep livestock losses due to coyotes and dogs to a minimum. If the cost of fencing an entire field is too high, a high woven-wire or predator-proof fence should be used for a night lot.

Coyotes sometimes kill sheep during the daylight hours, but putting animals in a lot at night is one of the best ways to minimize losses. The lot should be near the farmhouse, with a 7-foot woven-wire fence close to the ground that coyotes can't crawl under.

A night lot with any kind of fence close to the farmhouse is better than allowing the sheep to roam in a pasture at night. Lights and music played all night may help keep coyotes away. If a guard animal is used, it should be with the sheep in the night lot.

Once coyotes have started killing sheep and developed a pattern, trapping or snaring the problem animals is the best short-term solution. If traps are set in the pasture, sheep should be temporarily fenced out of the area. If this is not possible, the traps can be covered during the day and uncovered when the sheep are in the night lot. This makes the traps less effective because they are only being used part-time. If using snares at fences, it is seldom necessary to remove livestock.

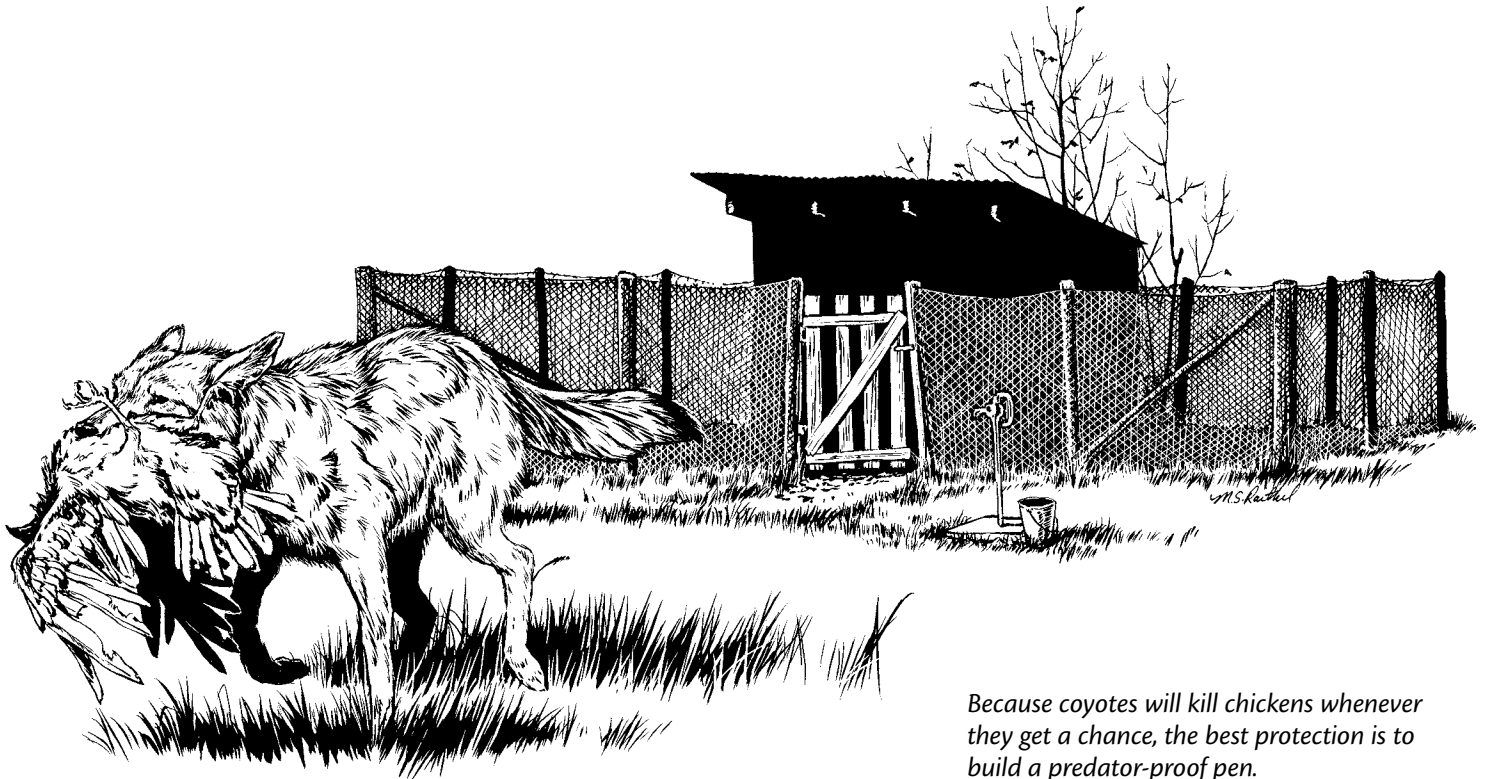
## Goats

Coyotes kill goats in a similar manner to sheep; therefore, husbandry and prevention methods for these two species are the same. Because Angora goats are especially vulnerable to coyotes, guard animals should be used if at all possible.

## Poultry

Poultry, such as chickens, ducks, geese and turkeys, are easy prey, and any passing coyote bold enough to approach an area where they are ranging will help itself.

Removing problem coyotes will only make space for other coyotes to move into the area. To stop poultry killing, predators would have to be trapped or snared close to the house, and this would endanger pets that are a part of most households. The best precaution, therefore, is to house the poultry at night where predators can't get to them and build a high, predator-proof pen for the fowl during the day.



*Because coyotes will kill chickens whenever they get a chance, the best protection is to build a predator-proof pen.*



*Dogs, unlike coyotes, usually attack from the rear, chase livestock, and abandon their kills without feeding on them.*

## **Dog or coyote — who's to blame?**

Coyotes often get blamed for livestock injuries and deaths caused by wild or domestic free-roaming dogs. Here's how to tell if a coyote or a dog is causing the damage.

### **Coyotes:**

- Usually go for an animal's throat
- Do not chase cattle
- Do not kill larger calves or grown cattle
- Usually kill one animal at a time and feed on it
- On rare occasions bite the tails off young calves. These "bob-tailed" calves usually survive.
- On rare occasions hamstring a larger calf or deer and feed on the still-living animal

### **Dogs:**

- Occasionally chase livestock through fences
- Attack wherever they can get a hold on the animal — often the hindquarters
- Chase cattle until the livestock become overheated or stressed
- Kill or injure several or all the livestock in an area
- Usually abandon their kill without feeding on it
- Chew on legs, ears and tails and often mangle the animals rather than killing them
- Leave dead animals over a large area where the dog(s) chased them
- Usually make indiscriminate wounds all over the animal but most often in the rear area
- Leave deep gashes, slashes, and other wounds

## DAMAGE PREVENTION AND CONTROL



*The best way to prevent coyote damage is to take preventative measures. Using guard dogs is one way to stop coyotes from killing sheep.*

Coyotes have been the focus of predator-control efforts for years in the western part of the United States where sheep production is big business. In these areas, poisons, traps, snares, airplane hunting, dogs and other methods have been used to control or eradicate coyote populations. For the most part, coyote numbers have remained relatively stable despite these extensive control efforts.

In Missouri, the situation is much simpler because sheep and cattle pastures are usually small — between 40 and 80 acres — and are often well fenced. Many times only one or a few coyotes need to be dealt with to stop livestock loss.

When coyotes are causing damage, people want the problem corrected but don't always want the coyote killed. "Can't you just catch the coyotes and move them someplace else?" is a question sometimes posed to wildlife damage biologists. The answer is, "No." Except on rare occasions, coyotes are

too cunning to be caught in cage traps. There are, however, many nonlethal options available to cope with coyote problems. In some situations, the only option may be to use a lethal method.

The Missouri Department of Conservation's wildlife damage biologists can help decide what will work best in a particular situation. They provide technical advice in preventing problems. If lethal methods are needed, they can assist landowners on the use of snares and traps or instruct on how to call and shoot problem coyotes. They also can sell traps or snares at cost to landowners dealing with livestock depredation.

### Nonlethal methods

When a coyote is suspected of killing livestock, the first impulse of many farmers is to kill the coyote. Although lethal methods of controlling coyotes may be the best short-term solution, the livestock producer should consider the following nonlethal methods that offer long-term protection.

### Guard animals

A popular, nonlethal method of preventing coyote damage to livestock is to use guard animals. Specially trained guard dogs, donkeys and llamas have been used throughout Missouri to protect livestock.

### Dogs

A good guard dog can protect sheep and goats from coyote damage. Larger breeds, such as Great Pyrenees, Komondor, Anatolian shepherds and Akbash, often work well to intimidate the much smaller coyote.

Guard dogs should be acquired as puppies and habituated to the flock or herd at an early age. Human contact must be kept to a minimum. If the guard dog is treated as a pet, it will not properly bond with livestock and its effectiveness will be lost. On the other hand, the guard dog needs to be tame enough that the owner can approach it for vaccinations, worming and other care.

Dogs have individual personalities: One dog may bond with the sheep or goats while another dog may not work as well. A good guard dog remains with the livestock at all times and confronts coyotes and other dogs that approach.

Guard dogs require a lot of initial training and must be provided with shelter and food in the field. They may be excellent guard animals for a while and become less effective later. Occasionally guard dogs have been responsible for killing sheep.

## Donkeys

Donkeys are used by Missouri livestock producers to guard sheep and goats.

Most donkeys have a natural dislike for coyotes and dogs, and they bond well with livestock. Select a gelding or jenny because the more aggressive jacks sometimes injure or kill sheep and goats. Do not place two donkeys in the same pasture or in adjoining pastures because they will bond with each other and not with the livestock.

An effective guard donkey remains with the sheep or goats at all times. Advantages of donkeys are that they are not high priced and do not require as much training and care as guard dogs.

As with guard dogs, there are no guarantees that a donkey will be 100-percent effective. It may be necessary to try more than one donkey to find one that functions as a good guard animal. One method of selecting a donkey is to put it in a small lot or corral with a strange dog, making sure the dog has plenty of escape routes. A donkey that reacts aggressively to the dog has a good chance of being an effective guard animal.

## Llamas

A few progressive livestock producers in Missouri use llamas as guard animals. Studies in Iowa have shown these animals to be quite effective in protecting sheep, goats and cattle. Aggressive toward both dogs and coyotes, llamas are easy to handle and bond with livestock in a matter of days. Do not place two llamas in the same pasture or in adjoining pastures because they will bond with each other and not with the livestock.

Although expensive initially, their longevity of 12 to 18 years and their usefulness as guard animals make the price reasonable over time. Llamas require little attention because they feed with the animals they are protecting.

## Fencing

A well-built net or woven-wire fence can be 100-percent effective protecting livestock from coyotes. The fence should be at least 7 feet high to keep coyotes from jumping over it.

An outward slant to the wire at the top can be added to keep coyotes from climbing over, and an apron of wire extending outward from the bottom will keep them from digging under the fence. If the apron isn't used, a few well-placed snares or traps should catch the occasional coyote that digs under the fence.

A shorter, woven-wire fence can be made taller by attaching extensions to the posts and adding extra wire.

A high-tensile electric fence can serve as both a livestock and predator-proof fence if it is built to the right specifications. Contact a fencing company for specific details.

Initial costs for this type of fence are comparable to or even lower than a woven-wire fence with barbed wire at the top. Beginning with a hot wire at the bottom, the fence should have at least 7 strands of alternating hot and ground high-tensile wire. Be sure the wires are stretched tight.

The fence must be maintained to ensure there are no washouts that will allow coyotes to crawl under without getting shocked.

Installing a single electric wire near the bottom of the fence to keep coyotes from digging or crawling under the woven wire is a waste of time and money. A high-tensile predator-proof fence built to specifications is the best fencing option.

Fences can be cost effective for small enclosures but may prove expensive for large pastures. In the case of protecting high-dollar exotic animals, a high fence or high-tensile electric fence should be considered. Losing a few expensive animals could quickly justify the expense of a predator-proof fence.

## Repellents

Although there have been experiments applying coyote repellents to sheep, so far none have proven very effective.

## Live trapping

Because most coyotes are too wary to be caught in cage traps, this method should be tried only with coyotes that are habituated to people and only as a last resort when shooting or snaring aren't possible. Use a large cage trap, bait it with meat and apply coyote trapping lure.

Live trapping is not as humane as it may seem because coyotes caught this way often bite and tear at the wire causing damage to their mouth and teeth.

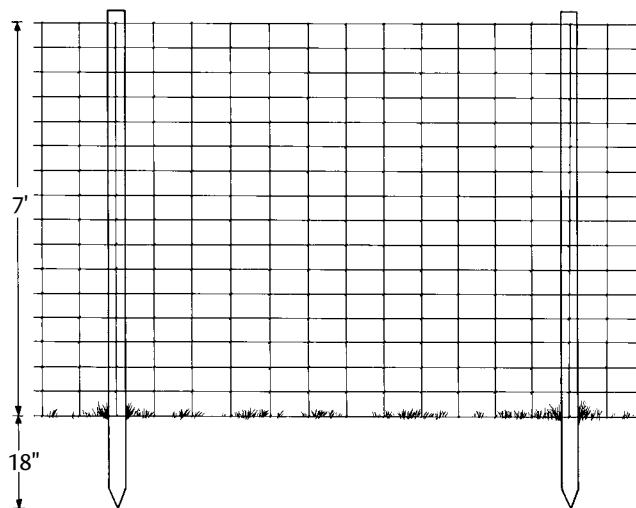
## Lethal methods

Lethal methods can be the quickest and most cost-effective way to stop coyotes from killing livestock.

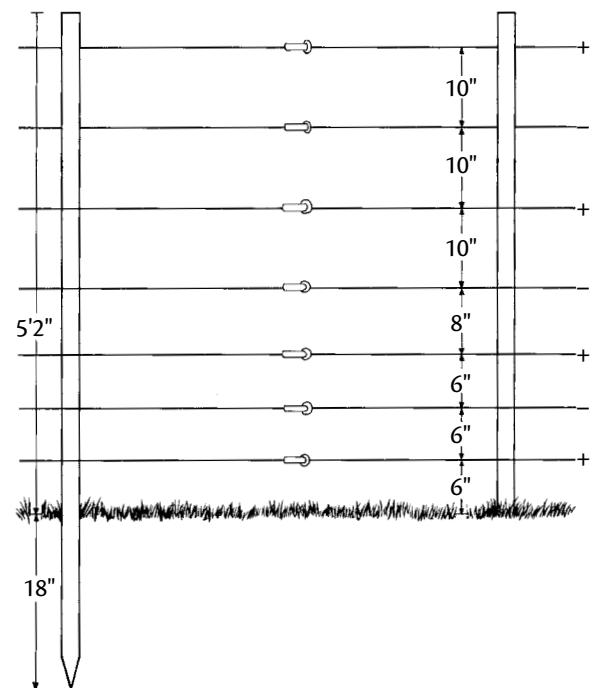
According to the *Wildlife Code of Missouri*, 3CSR10-4.130, coyotes that

**For tips on selecting and training guard animals, write for the free booklet, *Using Guard Animals to Protect Livestock*. Send your request to Guard Animals, Missouri Department of Conservation, PO Box 180, Jefferson City, MO 65102-0180.**

Fences designed and built to exclude dogs and coyotes can be virtually 100-percent effective. A predator-proof woven-wire fence should be at least 7 feet tall to keep coyotes from jumping over it and close enough to the ground to stop them from crawling under it.



A high-tensile electric fence doesn't need to be as high as a woven-wire fence because a coyote's first instinct will be to pass through the wires instead of jumping over it. This fence must be built to specifications to work properly. Check with a fencing company for specific details.



cause damage may be shot or trapped at any time of the year without a permit by the farmer, landowner or some other person acting as the farmer or landowner's agent. This person could be a local trapper, friend or relative. Coyotes captured or killed by the above methods must be reported to an agent of the Department within 24 hours and must be disposed of only in accordance with the agent's instructions. For more details, see Rule 3CSR10-4.130 of the *Wildlife Code of Missouri*.

Snares used on dry land are illegal in Missouri, but they can be used to control nuisance coyotes if the person experiencing the problem receives

authorization from a wildlife damage biologist.

Below are some lethal ways of controlling coyote damage. The most effective methods — trapping and snaring — are described in more detail later in this booklet.

## Shooting

Shooting problem coyotes is always an option in rural areas and sometimes within city limits if ordinances allow it. Coyotes are cunning but can be somewhat predictable. Therefore, shooters should spend time observing the coyote's habits to increase their chance of success. Many nuisance coyotes show a pattern of stalking livestock or poultry at a certain time of day. A coyote may visit its kill several times over a period of a day or two until the carcass is reduced to bones and hide.

Once the coyote's pattern becomes known, shooters must station them-

selves near the coyote's path, paying attention to wind direction so the animal won't catch their scent. Sunrise and sunset usually are good times to stake out a coyote kill.

## Using a call

Imitating the sound of a wounded rabbit using an electronic or hand-held call can increase the chances of drawing coyotes close enough to shoot them.

To be successful, shooters must have a clear view so they see the coyote before it spots them. They also must be in the correct location so the coyote doesn't smell them.

Calling can be effective in early summer to draw the attention of coyotes with pups in nearby dens. Calling also works near livestock kills when coyotes return to feed.

Electronic callers and hand-held or mouth-operated calls can be purchased in sporting goods stores.

**It is illegal to use toxicants and poisons to control coyotes! Poisons endanger people, pets, and other wildlife.**



## GUIDE TO TRAPPING NUISANCE COYOTES

**A** key to successful trapping is to use the correct trap for the job. A trap should be large, powerful and fast enough to catch the coyote that activates it.

For best results, choose a trap with a jaw spread of 5 to 6 inches. Smaller traps do not get as high a grip on the animal's foot, increasing the likelihood of escape. Traps with four spring coils are preferred because they have enough power to break through the dirt and close more quickly than traps with two coiled springs.

Also choose traps that have a center swivel and a re-enforced base plate. A central swivel attaches the heavy chain to the bottom of the trap, allowing the trapped animal to pull directly on the chain and eliminating undue damage to the coyote's foot.

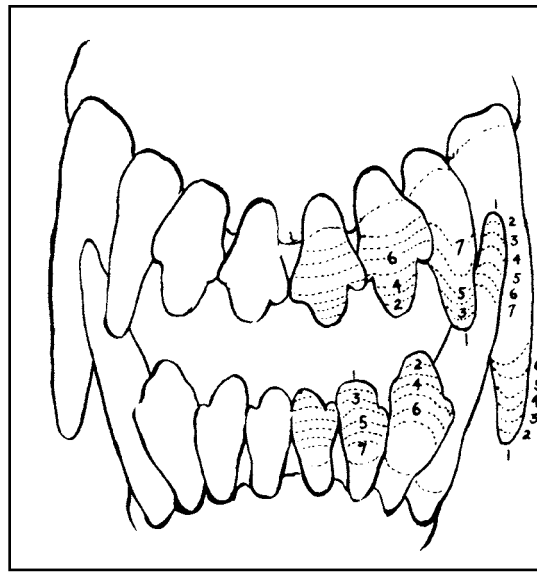
Traps described above are readily available from manufacturers.

The Department's wildlife damage biologists have traps that are suitable for catching nuisance coyotes, and these are available for purchase.

### Target animals

It is important to remove the coyote that is doing the actual damage. Other coyotes in the same family group may be caught in the process of catching the target coyote.

Contrary to common belief, it usually is not a coyote with its teeth worn down or an old female feeding pups that kills livestock. The prime-of-life male coyote between the ages of 3 to 5 years old is most often the culprit when larger livestock are being killed. This includes goats, as well as large lambs, and calves. This dominant male is stronger, more



*The age of a coyote can be determined by looking at the wear on the incisor and canine teeth. The dotted lines show the annual wear.*

Charles W. Schwartz  
illustration courtesy  
of the State Historical  
Society of Missouri,  
Columbia, Mo.

vigorous and more capable than older and younger males and females.

Other coyotes in the family group may be involved, but the dominant male is usually the one responsible. Younger coyotes and females may be involved when poultry is being killed.

After a coyote is trapped, check its age and sex to be sure the right coyote has been caught. Teeth wear is the best indicator of a coyote's age. Wear on the long canine teeth may be apparent, but the best indicator is wear on the front incisor teeth, located between the canine teeth. If the incisors show rounded lobes, chances are the coyote is a young animal. See figure above.

Coyotes between the ages of 3 and 5 usually show wear on the incisors, and the rounded lobes may be completely worn off, leaving the teeth flat across the top. This doesn't mean that the teeth of the dominant male are worn down noticeably, only that there is some wear on the teeth.

### Trap-set location

Traps must be set where the coyotes doing the actual killing can be caught. Coyotes are creatures of habit and return to the same area. Looking for the places where problem coyotes travel and visit regularly will be time well spent.

A good place to trap is in areas where coyote tracks and other sign indicate that the coyotes are coming into a pasture or pen. Traps also can be set in the vicinity of the carcass of an animal that the coyote has killed, as they often return to feed or loiter around the remains and mark the immediate area with droppings and urine.

High ground and ridge tops often are the best trap locations because coyotes like to travel these areas. Nontarget furbearers, such as raccoons, are less likely to be caught in these locations because they stay along creeks and in bottoms. Check for tracks to be sure that coyotes are in the area, but nontarget animals, including pets, are not. Dogs and cats are attracted to lures used to catch coyotes so traps should not be set in the area until pets are properly housed or restrained.

Trapping regulations also specify that traps must not be set in paths made or used by persons or domestic

**For best results, use four-coiled traps with laminated or rubber jaws. Because the jaws are wider, the traps are more humane to coyotes and nontarget catches, and are less likely to allow coyotes to escape.**

animals. To avoid further financial loss, trap sets for coyotes should never be made in pastures occupied by small livestock.

The following locations are good spots for trap sets as long as coyote tracks and other sign indicate that the target animals are passing regularly:

- Near, but not in, farm trails or livestock trails
- At the edge of fields
- Intersections of fences where farm trails pass through gates or intersect
- Any other open ground place that is not near or in brushy cover or high grass or weeds

Coyote trap sets should not be made directly under trees or against high weeds or brush because coyotes are apprehensive about approaching a trap near this type of cover.

When choosing locations for trap sets, look for both old and fresh tracks — an indication that coyotes use the area regularly. The presence of coyote droppings is another sign of a good place to set a trap. Coyote droppings are a little larger than a cigar and are usually black when fresh. They often show hair, fur and sometimes grass.

During times of year when coyotes are eating berries, fruit or insects, their droppings may resemble those of raccoons. When fresh, coyote droppings have a strong, distinct odor. Another way to tell coyote from raccoon droppings is location. Coyote droppings are usually found on higher ground and ridge tops, as well as at trail intersections and gateways. Often coyotes leave droppings on low bunches of grass, rocks or other natural objects. Coyote tracks or signs of “back scratching” in the ground nearby may help identify droppings as those of coyotes. These places make choice trap-set locations.

## Human and other foreign odor

Trappers have long discussed the consequences of leaving human odor at coyote trap sets. In the past, many wore gloves to keep their scent off traps and snares. Many modern-day trappers do

## Trapping rules and regulations

The use of traps for problem coyotes must be in compliance with the Conservation Department’s regulations. The main provisions are listed below. For more details, see Rule 3CSR10-8.510 of the *Wildlife Code of Missouri*.

### Traps:

- Must be attended daily
- Must be made of metal with smooth or rubber jaws
- Must be labeled with the user’s name and address
- Must not be set in paths made or used by people or domestic animals

### When trapping:

- Get permission before setting traps on a neighbor’s property.
- Notify all neighbors in the area of the location of traps, and ask their cooperation in keeping their pets away from the traps.

not take these precautions because they feel that gloves, which can easily become contaminated with lure or other materials, may transmit more odors than clean, bare human hands.

Most coyotes in Missouri are accustomed to people. With their keen sense of smell, they can detect human scent a mile on the wind and can smell this odor most of the time. Faint human scent in their territory doesn’t normally alarm them.

Coyotes can tell the difference between fresh and old scent. If they sense that a person is nearby, their strong survival instinct tells them to avoid the area. Still, coyotes are regularly caught within a few hours after a trap or snare is set.

Some people believe that coyotes are afraid of the scent of steel. If it were the case, coyotes would avoid fences, idle farm machinery and junk piles. It is important, however, that traps be kept clean.

Coyotes sometimes dig up traps that have not been cleaned after a coyote or other animal has been caught in them. They may be attracted to the smell of fecal matter or to the smell of the lure transferred to the trap from the trapper’s hands or gloves.

Coyotes aren’t always responsible for digging up traps. Raccoons and other animals are attracted to freshly

dug dirt. Sprinkling water over trap sets to form an old-looking crust can help keep some nontarget animals away.

With traps, common sense is the rule. It isn’t necessary to boil, dye and wax traps to catch coyotes, but they must be clean.

Dyeing and waxing, however, are good ways to prevent traps from rusting, especially in winter when salt is used to keep the dirt over the trap from freezing.

A rust-free, dyed and waxed trap is a fast trap. A fraction of a second can make a difference in catching a coyote or having it jerk its foot and get away.

## Trap sets for coyotes

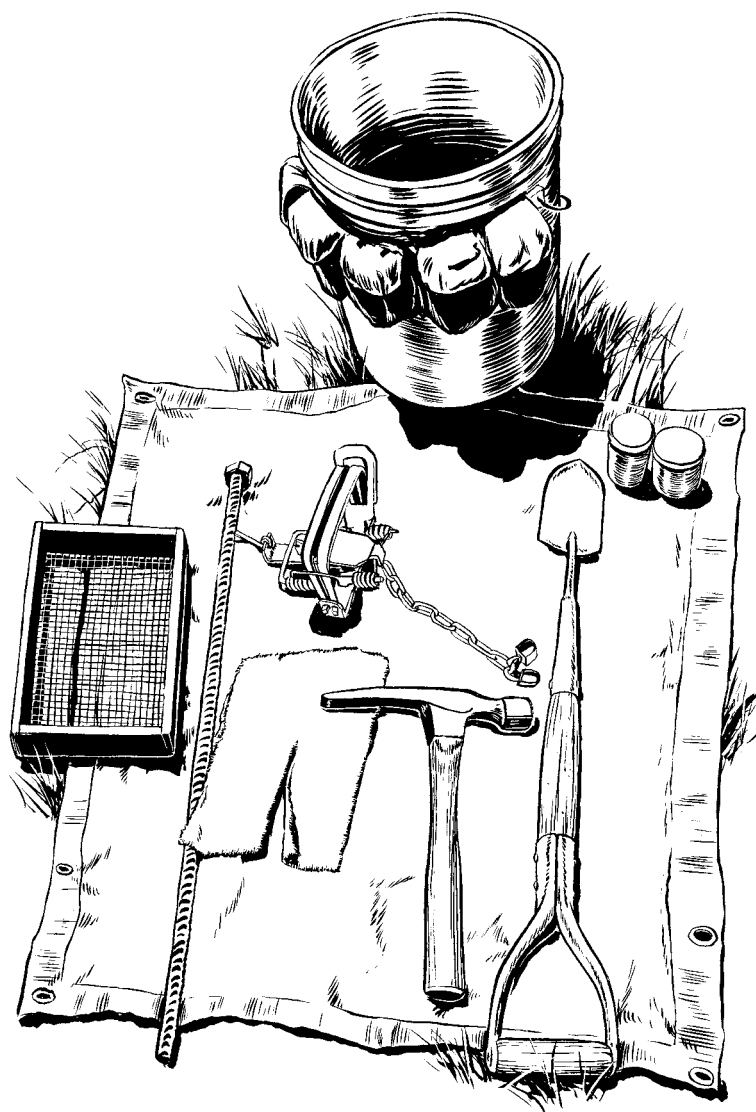
Three basic trap sets are commonly used for coyotes. They are referred to as dirt-hole sets, flat sets and blind sets. Each of these trap sets has its proper use.

### Dirt-hole sets

One of the most common sets used to catch coyotes is the dirt hole. It’s effective, simple and easy to construct with a few basic tools, such as a trowel, hammer or hatchet, sifter, 3-foot square kneeling cloth and bucket.

The dirt-hole set appeals to the coyotes’ instincts because it looks like a





*A few simple tools can help in the preparation of a trap set. A trowel is useful for digging the hole. A hammer or hatchet helps drive the trap stake. A sifter made of 1/8 inch hardware cloth is used to cover the trap with dirt. A 3-foot square piece of canvas or plastic tarp serves as a kneeling cloth and holds the freshly dug dirt until it is ready to cover the trap. Small jars hold the trapping lure. A bucket comes in handy for carrying all the equipment to the trapping site.*

hole where another animal has buried food. The completed set has bait or lure placed in the hole to attract a hungry or curious coyote (see Page 16). The addition of urine or gland lure makes the set even more attractive. The trap is carefully concealed so the coyote will be caught when it investigates the hole.

Locate the dirt-hole set near and at a right angle to the path of the coyote's anticipated line of travel. The hole can

be dug on level ground; but if there is a slope to the ground, the hole should be dug into the slope.

Because much of Missouri's soil is heavy gumbo or clay, care must be taken to locate a well-drained place where the trap can be firmly bedded and where it can withstand some rain. Once the soil over the trap has been rained on and dried by the sun, a heavy dirt crust forms over the trap. This is

a major reason why strong powerful traps with an adequate jaw spread are necessary. Weak traps with a small jaw spread will not break through the dirt crust quickly when the coyote activates the trap.

It's nearly impossible to keep dry dirt on traps in cold weather because of rain and snow. The trap may have to break through wet or frozen soil. Mixing salt with the dirt on top of the trap helps keep the soil from freezing. See Page 19 for more details on trapping in frozen ground.

## Flat Sets

Flat sets, also called scent-post sets, are used to trap coyotes along a farm trail, cow path or at the edge of a field where coyotes regularly travel. The presence of coyote tracks is the best indicator.

A natural spot to place a flat set is near a clump of grass in the area where a coyote has left droppings (see Page 18). If a natural scent post is not available, a piece of rotten wood, dried cow chip or clump of sod can be moved to the area as a lure object.

The lure object should be large enough to attract the attention of the passing coyote. Two large cow chips stacked on top of each other is a good example of the right size.

Place the lure object perpendicular to the coyote's path. Bed and cover the trap at the end of the lure object off the path, using the same techniques as when making a dirt-hole set.

Because the flat set is more natural looking than the dirt-hole set, the covering over the trap should be camouflaged with dried grass, leaves or pulverized dried cow or sheep manure that has been grated through a sifter.

Finally, place gland lure or coyote urine on the upper edge of the lure object just above the trap. To keep the coyote's attention, place a curiosity lure in a small depression under the bottom edge of the lure object. A curiosity lure attracts coyotes because of its unusual smell.

Droppings on the lure object add to its appeal. Coyote urine or gland lure also can be placed on the droppings.

## How to construct a dirt-hole set

**Step 1.** Dig a hole about 4 inches in diameter and 8 inches deep at a 45-degree angle. If possible, dig under a small bunch of grass that can serve as a backing. Use a dried cow chip, bone, or small piece of wood for a backing if grass is not available. Place the dirt from the hole on the kneeling cloth so it is easily accessible for covering the trap.

**Step 2.** Place the trap 2 to 3 inches from the hole to determine how large to dig the trap's bed.

**Step 3.** Set the trap aside, and dig another hole an inch or so below ground level and wide enough for the trap and stakes.

**Step 4.** Level and smooth the trap bed.

**Step 5.** After placing the trap in the freshly dug hole, drive a stake through the attachment on the swivel. For the stake, use a 5/8-inch reinforcing rod stake at least 28 inches long with a nut or washer welded to the top end.

If the ground is rocky, it may be difficult to drive the stake into the ground. If so, substitute two 16-inch reinforcing rod stakes and drive them in the ground at 45-degree angles.

Use the cross-stake method if the ground is wet or the soil is loose. See a cross-stake set up in the drawing below.

Once the stakes are in the ground, place enough reserved soil to bed the trap and firmly twist it into the dirt. The trap should be about an inch below ground level.

**Step 6.** Once the trap is bedded in the hole, place polyester pillow stuffing below the trap's pan to create a void and keep out dirt, which would prevent the pan from dropping and activating the trap. Other pan cover material can also be used.

**Step 7.** Pack the soil firmly all around the outside of the trap to bed it securely. This keeps the trap from tipping if the coyote steps on the soil outside the trap. If the soil dug from the hole is too wet

**Offset the trap 3 to 4 inches to the right or left of center of the hole.**

or too coarse, find drier soil along protected cutbanks, or under fallen logs or hay bales.

**Step 8.** Once the trap is firmly bedded, sift 1/4 to 1/2 inch of dry dirt over it. A homemade sifter with a 1/4- or 1/8-inch mesh screen of heavy hardware cloth with wood sides will screen out all coarse dirt, rocks, and other debris from the trap covering, ensuring that the trap will work smoothly.

To make a place for the coyote to step as it approaches, create a saucer-like depression in the dirt over the trap. The depression should be sloped slightly toward the opening of the dirt hole. Arrange small pebbles or dirt clods carefully around the trap, but be careful that pebbles or clods are not in the way of the trap jaws. Since coyotes like to step on smooth soil, the arrangement of pebbles and clods, along with the saucer-like depression over the trap, are effective in guiding a coyote to step on the trap. This is more important than the actual placement of the trap in relation to the dirt hole or lure.

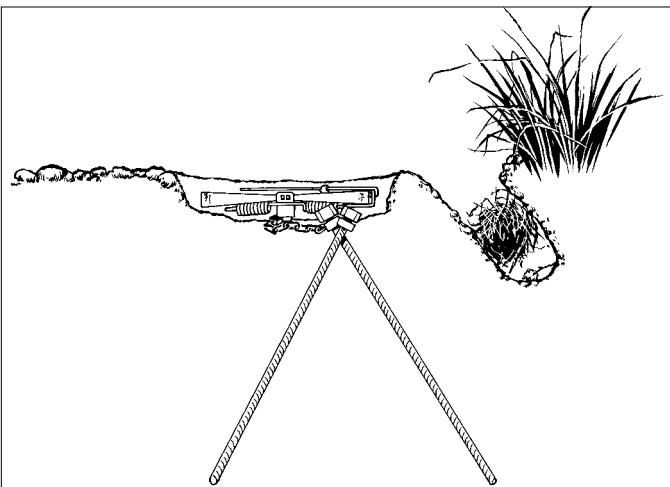
In summer conditions, the dirt covering the trap will be dusty, making it an attractive dust-bathing location for birds and rabbits. A thorough sprinkling of water over the finished covering will cause a crust to form over the trap. The dirt crust is less attractive to rabbits and birds, which lessens the chances of making nontarget catches. The dirt crust also gives the trap set an aged appearance

and seals in any undesirable odors that might be on the trap or the pan cover.

**Step 9.** The last step is to add bait, lure, or scent. The combination of two or more coyote lures in the hole makes the set more appealing and is more effective than using just one. Tainted meat bait, such as the flesh of beaver, bobcat, cattle, or skunk, is a popular lure used in a dirt hole, but they deteriorate in hot weather. Many trappers use commercially available lures, which are more convenient and less messy than meat bait. Others make their own lures. Three popular recipes can be found on Page 21.

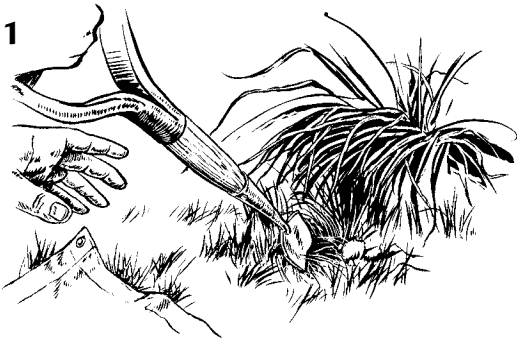
Use at least two coyote lures in the dirt hole. Pour the lures directly on the bottom of the hole. After the lures are applied, roll up a wad of dried grass and place it in the hole. Then place coyote gland lure, coyote urine, or red fox urine on the backing. Coyote droppings can be used along with the gland lure or urine. If two or more dirt-hole sets are made in a close area, use a different combination of lures at each set to give each trap set a different smell.

**Step 10.** The finished dirt-hole set should look like an animal has dug a hole and scattered the dirt back in the process. The dirt-hole set is effective partly because of its visual appeal. Coyotes are attracted to mounds of dirt like gopher mounds, mole hills, and badger dens. Extra dirt in a trap-set location can make the set more attractive.



**Cross section of a completed dirt-hole set with cross-stake setup.**

**Step 1**



**Step 2**



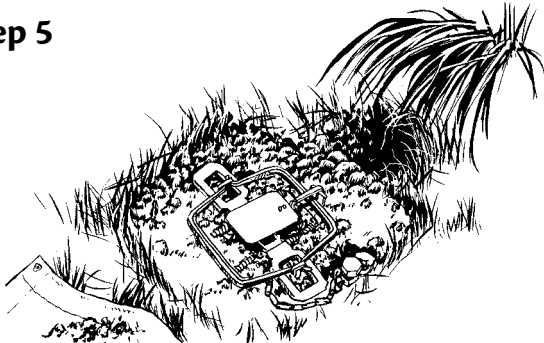
**Step 3**



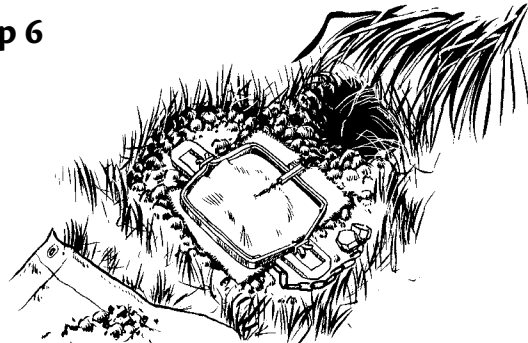
**Step 4**



**Step 5**



**Step 6**



**Step 7**



**Step 8**

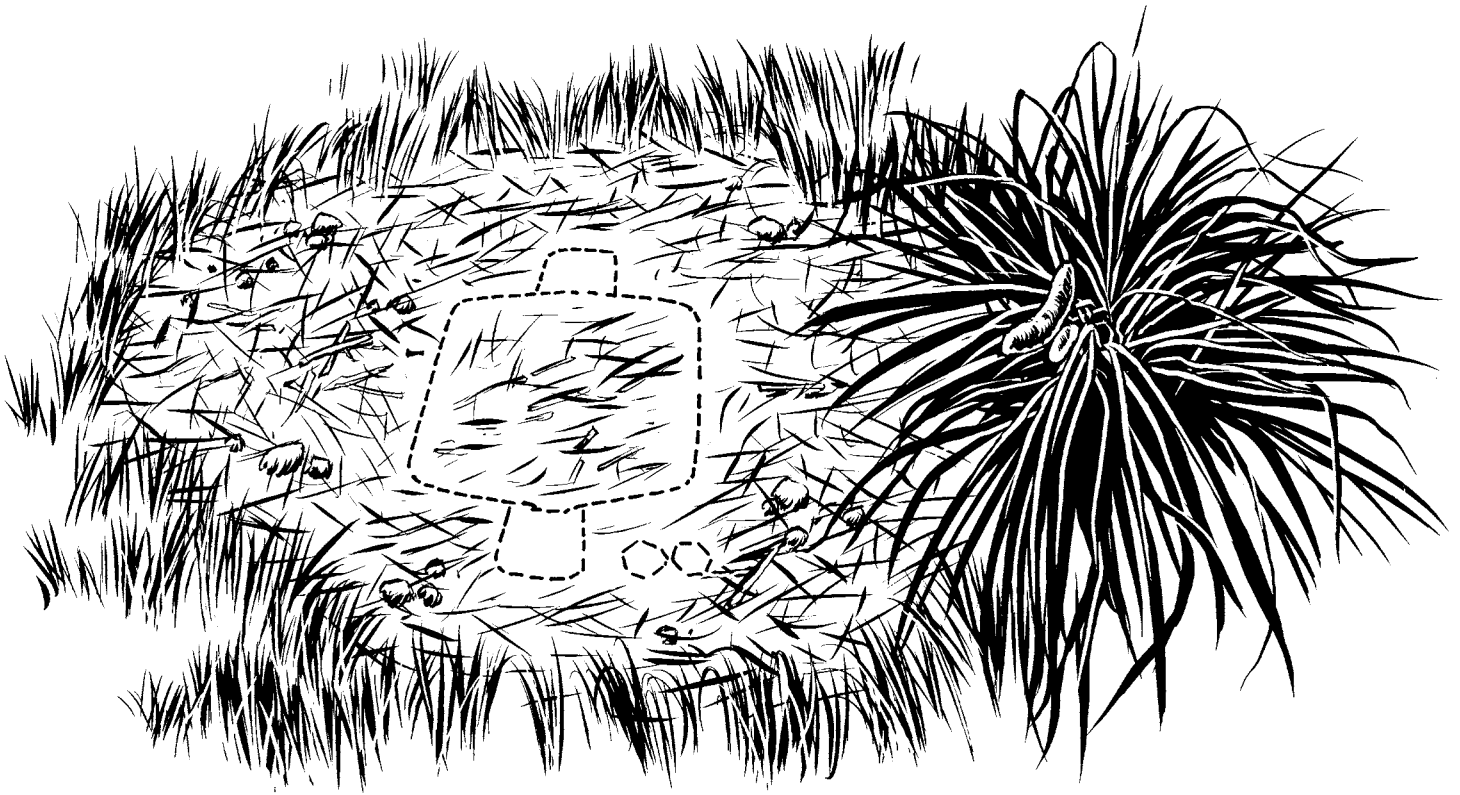


**Step 9**



**Step 10**





*A flat set is more natural looking than a dirt-hole set. Dried grass, leaves, or pulverized dried manure added to the top of the set help camouflage the trap.*

## Blind sets

Blind sets are used as a last resort to catch a specific coyote that is difficult to trap. Place the set in an area where tracks show the coyote has been stepping. A good example would be a place where the coyote jumps over a fence into a field.

Blind sets are concealed and covered the same way as flat sets (see Page 19). Place the trap in the exact spot the coyote hits the ground when it jumps over the fence or when it leaves the ground to jump.

Hide the trap carefully, and place small sticks on either side of the trap to direct the coyote into it. Bare ground in an otherwise grassy area provides the coyote an inviting spot to place a foot.

Blind sets at these locations are usually selective. No bait or lure is used to attract nontarget animals, and the coyote is usually the only animal jumping over the fence at these places. Blind sets also can be used on trails and at crawl-under locations at fences.

## Trapping at carcasses

Coyotes come back to the remains of kills even if little is left but the hide and larger bones. These also are favorite places for them to leave urine scent posts and droppings. Trapping at carcasses can be effective when no other trap-set location can be found.

Three or four trap sets placed in the vicinity of a carcass is a good place to target a problem animal. Because more than one coyote may be visiting the carcass, setting several traps may be necessary. It is common to catch more than one coyote at the same time.

Set either dirt-hole or flat sets 30 yards or more away from a livestock carcass. Do not set traps too close to carcasses or other visible meat baits because scavengers, such as crows, turkey vultures and eagles, might be caught. Stake the carcass so the coyote cannot drag it away from the area.

## Resetting after a catch

After a coyote or nontarget animal has been caught in a trap, the set should be

remade unless there is reason to believe that the target coyote has been caught. When remaking a dirt-hole set, clean debris and dirt from the hole. Remove the dirt from the area where the trap is to be reset. If dirt mixed with lure is placed over the trap, the coyote may dig it up and not get caught.

Use dirt that is not contaminated with lure to bed and cover the trap. Bring in fresh dirt and use a clean trap if possible.

Place any droppings from the trapped coyote on the backing of the dirt hole. The scent, urine and droppings of the trapped coyote add to the attractiveness of the trap set and make it easier to catch additional coyotes.

Nontarget animals sometimes are caught in traps set for coyotes. Release them carefully. Reset with a clean trap and fresh dirt. Gather any fur or bits of animal matter to avoid drawing nontarget scavengers to the area.

Flat sets can be remade in the circular area that the struggling animal created. Reconstruct the set so that the coyote steps in the trap when investigating the lure object.

## Trapping in frozen ground

Most coyote problems occur in the spring and summer. If a coyote causes a problem in winter, it is usually a mature adult. Most of these coyotes are too wary to be caught in winter trap sets because they can smell the salt used to keep the soil above the trap from freezing.

If trapping when the ground is wet or frozen, carry in dry soil mixed with salt. One part salt to four parts dry soil is adequate in most winter conditions.

Even when the weather is dry, it's a good idea to use salt when trapping in the winter. The trap may not work if rain or snow dampens the soil after the set has been made. A final thin layer of dry soil should be added over the soil and salt mixture.

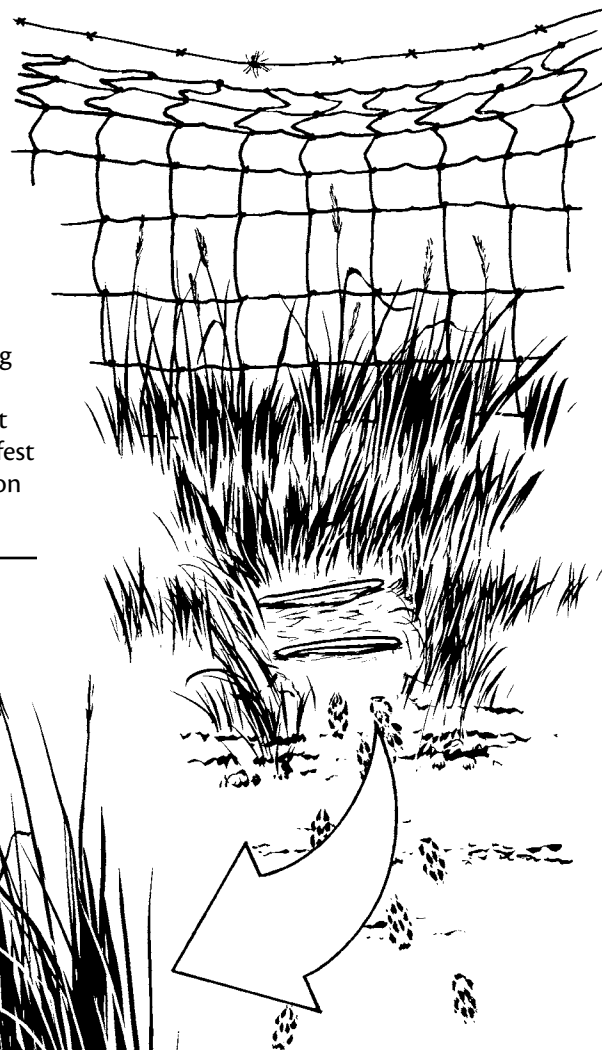
If snow covers the trap set, use a broom to wipe it away. Clear a circular area 5 or 6 feet across, and place the trap in the center.

Dirt-hole sets are the best for snow conditions because the dug-out hole with the dirt strung over the snow appeals to coyotes.

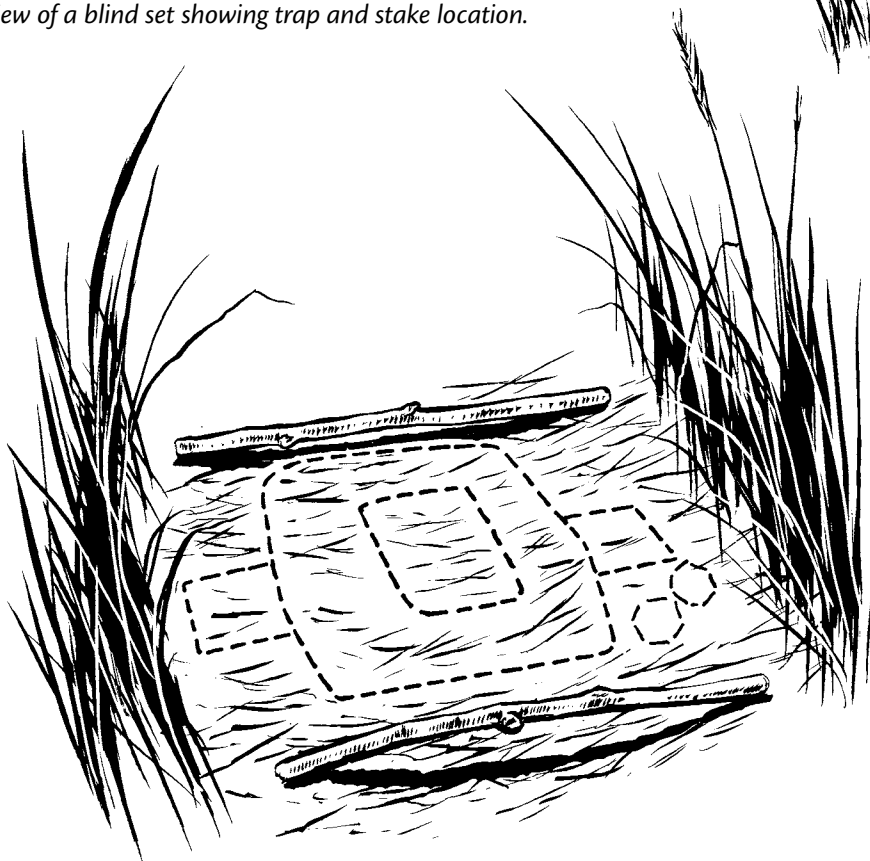
## Releasing nontarget animals

A catch pole with a sliding loop that is placed over the animal's head works well for releasing nontarget animals. As an extra precaution, use a shield to keep the animal away from you. An inexpensive shield can be a 4-by-4-foot piece of plywood with handles secured to the back. First, secure the loop of the catch pole around the animal's neck. Then pin the animal to the ground, taking care to avoid the animals' teeth or claws, and release it from the trap. This is the safest and least stressful method on the animal and the trapper.

**Important tip:**  
**Coyote traps must be staked properly.**  
**Coyotes are not large animals, but they will fight hard to escape.**



*Top view of a blind set showing trap and stake location.*



Blind sets are used to trap hard-to-catch coyotes. The trap is placed in the exact spot the coyote touches the ground when it jumps over a fence or at the spot it stands when starting to jump. The carefully placed sticks direct the coyote to step in the trap. When scouting for a location, look for coyote tracks in areas where the fence sags.

## How to make a catch pole

Material:

- 5 feet of ½ to 1 inch conduit, PVC, or steel pipe
- 9 feet of cable, ¼ inch in diameter
- 2 hose clamps
- Electrical tape
- Dowel rod for handle

Drill a hole in the dowel rod and insert the cable. Cinch with a hose clamp. Run the cable through the conduit and make a loop. Use electrical tape to cover the clamps and the end of the cable.

## Care of traps

After a trap has become fouled with dirt and animal scents, clean it with a high pressure hose at a car wash or soak it in hot, soapy water and scrub it with a stiff brush. Then rinse the trap in clean water and hang it outside to dry and air out. Take caution when boiling traps for extended periods because it can weaken the springs.

Dyeing and waxing traps is not absolutely necessary unless the trap is used in winter and exposed to salt. The process is time consuming, and some parts can be dangerous. These techniques do, however, protect traps from rusting, help them last longer and make them close faster. When salt is used to keep a trap working in freezing weather, the traps quickly rust if not treated.

One of the time-proven commercial dyes is called log wood crystals. The dye is put in a large container of water, which is heated until it boils. The traps are added to the boiling water and left until they develop a brown or black color.

Some commercially available dyes are easier to use because they do not require boiling. However, they are highly concentrated and must be mixed with unleaded gasoline, which leaves a chemical smell. When using these dyes, air the traps for several days before setting.

*Using a catch pole is the safest and least stressful way of releasing a nontarget animal.*



New traps with factory oil still on them should be left outside in the weather and allowed to develop a light coat of rust so they will take the dye. Do not boil rubber-jawed traps because the boiling water causes the rubber pads to deteriorate.

After traps are dyed, they should be waxed with canning paraffin. Melt the wax in a large pot at a very low heat until the wax is just bubbling.

Keep the heat low because paraffin is flammable. Waxing traps can be dangerous. To be safe, do it outside and away from children.

Lower the traps carefully into the melted wax and leave them until they take on a thin coating. Then remove the traps, and hang them up to dry. Before using, remember to clean the wax from the trigger mechanism so it won't trip too easily.

## Coyote trapping lures

Many types of commercial coyote lures are available because a variety of odors attract coyotes. Curiosity lures, which are made of ingredients such as beaver castor and tonquin musk, attract coyotes with their unusual odor. Call lures are made of strong odors like skunk essence that bring coyotes into the area from a distance.

Old-time trappers' recipes included ingredients like prairie dog or bobcat flesh, horse meat and the frog from a horse's hoof. All these lures have one thing in common: they all smell horrible!

Many coyote trappers have their own special recipe. Some of these formulas have been traded over the years, but many favorite recipes are closely guarded secrets.

Three lure recipes that have proven successful over the years can be found on Page 21. Check trapper supply stores for ingredients.



## Ron McNeely's Tried and True Coyote Lure

Place 2 inches of glycerine into a clean gallon jar. Glycerine, which acts as a preservative and antifreeze, makes the lure last longer in wet weather.

Add equal parts of sun-rendered fish oil and rotten eggs (see recipe below) to within 1 inch of the shoulder of the jar.

### To this base mixture, add:

- 20 drops of pure skunk essence
- 3 heaping tablespoons of beaver castor
- 3 teaspoons of tonquin musk

Stir well. Place a lid loosely on the jar so that gas can escape. Put the jar in a cool dark place for six to eight weeks. From time to time shake well. At first the ingredients will separate, but after a few weeks they will bond together. The end product is rather thick, similar to a thin paste.

## Rotten Eggs Lure

The best time to make this recipe is in late October or early November when fly season and hot weather are over.

Break approximately 4 dozen eggs into a gallon jar, allowing room at the top for expansion. Discard the shells. Stir the eggs until they are well beaten. Cover with a flat lid, but do not tighten. Store egg mixture for a couple of months.

Rotten eggs can be used by themselves as a lure or can be mixed with other ingredients.

## Old Trappers' Reliable Coyote Gland and Urine Lure

When skinning a coyote, remove the anal area surrounded by a patch of fur on the carcass. The anal glands are located on each side of the anal opening.

Cut deeply all around the opening. Pull out the anal glands and about 6 inches of the intestine. Include droppings found in the intestine. If possible, remove the bladder. On females, take the vagina and reproductive organs.

Grind up all these parts, and place in jars. Add just enough unpreserved coyote urine to cover the mixture. Place in a wide-mouth jar. Place a lid loosely on the jar so gas can escape. Put the jar in a wooden box and place screen wire on one end of the box to keep flies from laying eggs on the outside of the jar. Let the mixture age until the flesh breaks down, which could take a year or more.

Later, add enough coyote urine to thin to a paste and store in a bottle that can be carried to the trapping area.

*Many people believe that coyotes reduce the rabbit population, but this is not necessarily true. Coyotes are opportunists and eat rabbits when they are most plentiful. Most years, they eat more mice and rats.*



## GUIDE TO SNARING NUISANCE COYOTES

**S**nares and cable restraints are similar tools, but the methods with which they are used vary. Cable restraints are intended as fur-trapping tools and can be used to catch problem coyotes alive. If cable restraints are used, provisions of the *Wildlife Code of Missouri*, Section 8.150 must be followed, unless the livestock owner has obtained authorization from a wildlife damage biologist.

Placing snares around the perimeter of a pasture is the most effective way to catch the coyote that is killing livestock.

Using snares on dry land is illegal in Missouri, but landowners and farmers can get authorization from a wildlife damage biologist to use snares to catch nuisance animals. The biologist will assist the landowner on the use of

snares and sell them to those experiencing damage.

Snares are inexpensive and easy to use. Good quality snares are made of 3/32 galvanized or stainless steel aircraft cable. Discard a snare after it has caught an animal because any kink or bend in the cable will make the snare ineffective.

Snares should be clean and free from odors. Hang them outside in the weather for a few days to get them ready to use. If a snare has been exposed to substances, such as motor oil or food, boil it in water to remove any smells. As with traps, wash hands before handling and setting snares.

Snares are more selective than foot-hold traps. Most small nontarget animals are less likely to be caught in

snares if the procedures listed below are followed.

Dogs, however, are vulnerable to snares. It is imperative that neighbors and hunters know snares are being set so they can keep their dogs out of the area until snaring efforts are discontinued.

### At fences

Coyotes can jump fences up to 5 feet tall but prefer to crawl under them. Even a well-kept, woven-wire fence may have low areas where coyotes can gain easy access to the pasture.

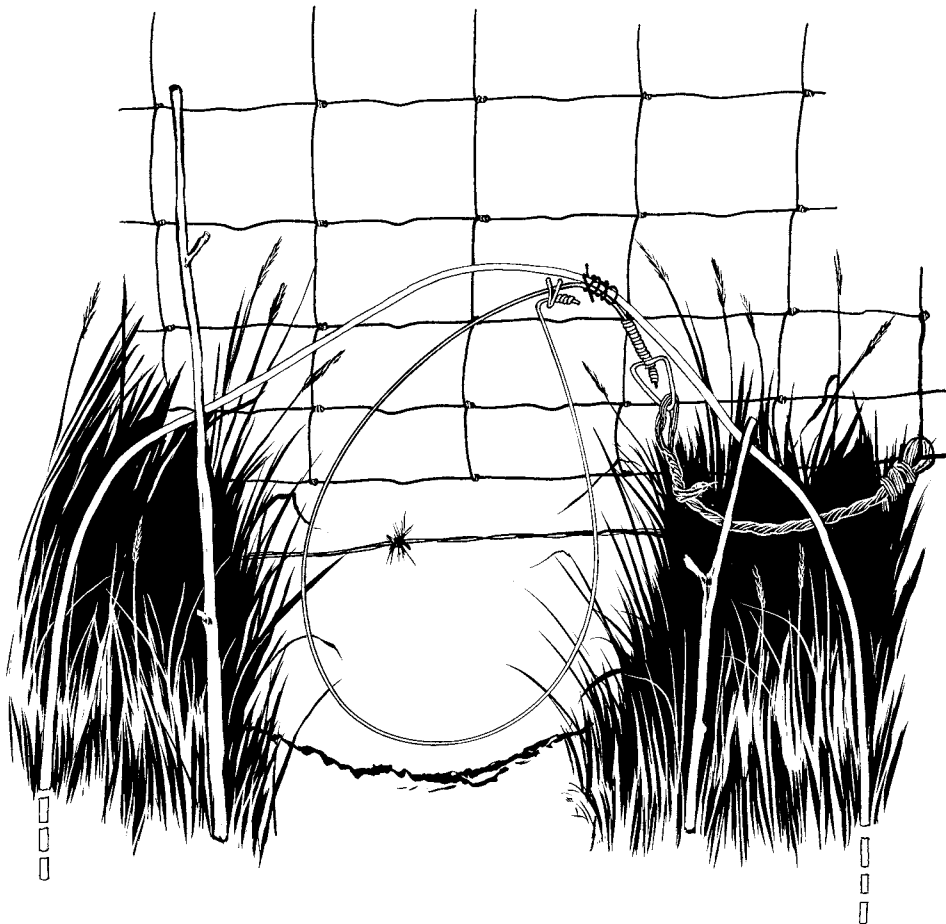
Coyotes take advantage of ravines, small creeks and other low areas to enter a pasture. They may go under barbed-wire fences that are stretched tight with the wires close together.

To find a place to put a snare, look for coyote tracks, coyote hair on the fence or the appearance of a hole or trail under the fence. If a coyote's crawl-under spot has been found, it is almost certain that the coyote can be snared in that location because coyotes habitually use the same paths. Raccoons, opossums and other small animals also use crawl unders, so be sure the signs are those of coyotes.

Extra care should be taken if sheep, goats or pigs are pastured close to the desired snare location. If they cannot be moved away from the snare location, then the snare should not be set.

If pastured animals stick their heads under the fence, the snare should be set on the opposite side far enough back so they won't be caught. If the presence of livestock doesn't influence where the snare should go, put it on the side where weeds and grass can help camouflage and guide the coyote into the snare.

A snare placed in a small opening — less than 8 inches high — increases the chances of catching nontarget animals. In this situation, place the snare away from the fence about 10 to 14 inches with the bottom of the snare just off the ground. This should catch the coy-



*When trying to catch a coyote as it enters or leaves a field or pasture, place the snare at the fence with the bottom of the snare just off the ground. Secure it to the heaviest fence wire — which is usually at the bottom — a fence post, or live heavy sapling nearby.*



ote whether it's approaching the fence or has just finished crawling under it.

Sometimes at low places, a coyote may be able to walk under a fence without stooping. If this is the case, set the bottom of the snare 10 to 12 inches off the ground, which is about the height of a standing or walking coyote. If the coyote has to crouch slightly, the snare position should be adjusted accordingly.

After the location has been selected, installing the snare is fairly easy. To support the snare, cut a length of black, No. 9 gauge wire. Make it long enough so that both ends can be pushed into the ground at least a few inches and the wire can be adjusted to the height of the snare.

Push each end of the No. 9 wire well into the ground so that it makes an inverted "U" shape over the area where the snare is to be positioned. Bend the wire up or down to adjust the snare's position. Snare cables are hard to cut, so always carry a good pair of sloped-nosed electrician's pliers to release nontarget catches.

To attach the snare to the No. 9 wire, first hold the snare cable with your thumb and finger close to the swivel — between the swivel and the lock. Hold the snare directly under the No. 9 wire. With the other hand, tightly wrap a 5- or 6-inch piece of baling/tie wire, or heavy tape around the snare cable and No. 9 wire to hold the snare securely in place. Make sure the wire is wrapped between the slide lock and swivel.

To keep the snare from tripping too easily, be sure that the angle of the snare at the lock is level, rather than sloping downward. The lock can be gently wedged against the support wire to help hold it.

Once the snare is in place, check to be sure it works smoothly by tripping it by hand.

## Rules to Follow When Using Snares to Control Coyote Damage

- Obtain and have in your possession a valid authorization to use a snare for wildlife damage control.
- Seek training in using snares from a Missouri Department of Conservation wildlife damage biologist.
- Notify pet owners in the vicinity that snares are in use.
- Place snares where livestock cannot be caught.
- Attend the snares daily so that nontarget animals can be released unharmed. Daily maintenance is imperative because snares are often knocked down by nontarget animals, wind or rain.
- Use snares until the coyotes causing the damage have been captured, and then remove all the snares. Coyotes become wary of snares after a while, and continuing to use them may result in making target animals hard to catch.
- Report all wildlife caught in snares to an agent of the Department for proper disposition advice.

Next, wire the swivel end of the snare directly to the fence or other secure object with a double strand of baling/tie wire. If a fence is used, make sure the fence wire isn't rusty and weakened. Coyotes are not large animals, but they fight hard when snared. The wire used to attach snares to fences, stakes, saplings or drags must be strong enough to keep a coyote from escaping. If using steel 16-gauge tie wire, twist four strands together to form a strong cable.

Snares set back from fences can be tied to small trees. The tree must be large enough so the coyote cannot chew through it and escape.

Snares also can be secured with 5/8-inch diameter re-enforcing rod stakes 30 inches long with a nut or washer welded to the top.

Occasionally a snared coyote will chew through a snare cable. This can be avoided if the snare is attached to a fence because the snared coyote will

often climb the fence and hang itself to death on the opposite side.

Once the snare is in place, put small sticks, brush or dried weed stems on either side to help conceal it and to guide the coyote through the loop. Do not allow the guide sticks to touch the snare because they might prevent it from working properly.

Carefully placed brush can be added if a coyote is going under or through a barbed-wire fence in a number of places. Leave open a few of the better snare locations where fur on the fence or tracks indicate coyote use.

Even good snare locations can be improved with a little extra work. Enlarging an opening can make it more attractive to a coyote looking for a place to enter a pasture. This can be done by digging underneath the fence or raising the bottom fence wire.

**A word of caution: Because the proper loop size to snare a coyote will also catch a medium-size dog, every precaution should be taken to make sure that no dogs will be in the area. Dogs that are used to a chain and collar may not injure themselves when caught in a snare, but there is always a chance of them being injured or killed.**

## On trails

If a well-defined trail through weedy or brushy cover approaches a place where coyotes are crawling under a fence, a snare can be set in the trail several feet from the fence.

Support the snare with No. 9 wire. Make the snare loop a little larger — about 10 to 12 inches across — than the ones used at crawl-under locations. The loop should be suspended so the bottom of the snare is 10 to 12 inches off the ground.

When positioning the snare, choose a location where the trail has dense vegetation to hide the snare and where the trail is narrowed by brushy or weedy vegetation. Take care not to walk around the snare once it is in place. The path made by walking around the snare might encourage the coyote to follow it rather than the trail where the snare is placed.

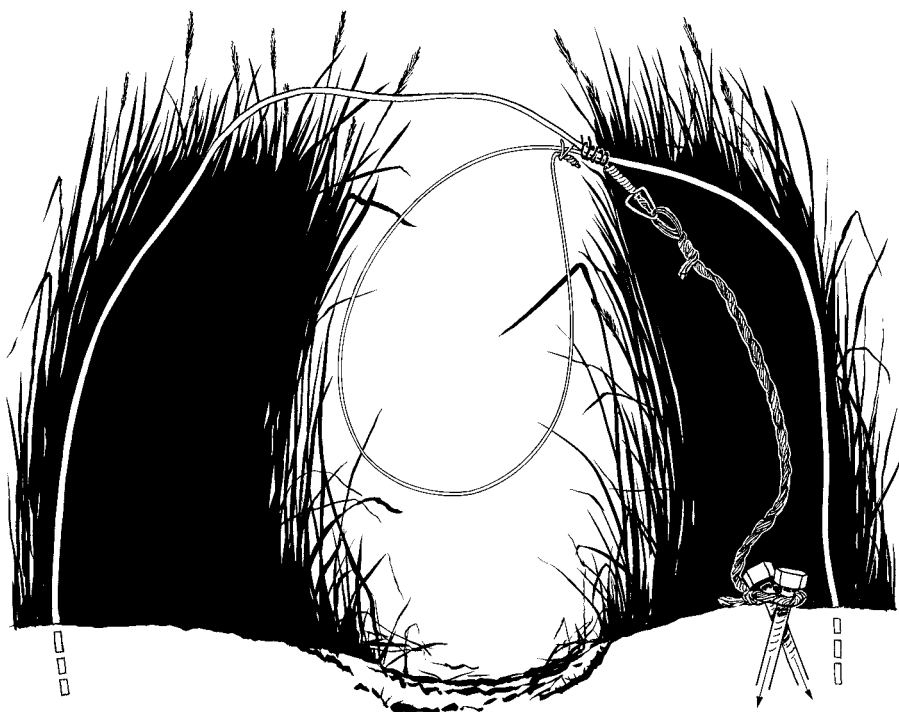
If the trail is not well defined, it can be enhanced by walking back and forth

through the cover and removing weeds or brush that are in the way. Be sure the trail isn't much wider than the width of the snare.

If the cover along the trail isn't quite dense enough, narrow the trail

by adding brush on either side. Adding upright twigs or dry weed stems to the sides of the trail is another way to improve the snare location. Coyotes usually tolerate some alteration to the existing trail, but it is best to do no more than necessary.

Coyote tracks leading from a row crop field into a field border is another good place to set snares. Again, brush, upright twigs or weed stems should be used as needed to narrow the path.



*When setting snares along a trail, suspend the loop 10 to 12 inches off the ground and stake the snare with re-enforcing rods. If the trail is too narrow, make it wider by walking back and forth and removing some of the weeds or brush.*

## The Snare Advantage

Foothold traps can help control nuisance coyotes, but snares often work better when good snare locations can be found. When they can't, traps may be the best and only option available to capture problem coyotes.

### Traps:

- Are more difficult to learn to use
- Are more likely to catch nontarget animals
- Are more likely to be detected and avoided by coyotes
- Require more daily maintenance
- Require more time to set
- Can't be set in the pasture where coyotes are killing livestock because of the chances of the livestock springing the traps or getting caught

## In brush with a carcass

If there are no suitable snare locations at trails or fences, a snare can be set in brush or weeds using the carcass of a hog, deer or horse as bait. Coyotes seem to prefer the decomposing carcasses of these animals over cattle or sheep.

Place the carcass in the brush, and make three or four trails to it by walking back and forth. Do not make the trails wider than the snare. If the cover is sparse, add brush to guide the coyotes along the trails. Place each snare several yards from the carcass.

Suspend the bottom of the snares 10 to 12 inches above the ground to target coyotes and allow smaller, nontarget animals to pass underneath without being caught. Wire the snares to nearby small trees. If a small tree isn't available, attach the snare to a drag, such as a log or wooden fence post.

## IDENTIFYING COYOTE TRACKS

**Coyote tracks**



**Dog tracks**



*Check tracks around a kill carefully to be sure the culprit is really a coyote and not a dog. Coyote tracks are pointed, whereas dog tracks are much more circular.*

## **NOTES**



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